

Reptiles and Batrachians from the north-west
of Madagascar collected by V. Kaudern
1906—1907.

By

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D:R. KAUDERN gives the following information concerning the places, mentioned in the following as habitat of the different species.

Majunga, the starting point of his journey, is a little town on the northwest coast of Madagascar, situated on about 15° s. lat., on the bay of Bombetoke. The country surrounding this place is dry, sandy, and hilly, the ground becoming damper nearer to the coast, where a large mangrove-marsh extends along the shore of the bay. Here and there the country was so low that the ground was covered with a thin salt crust, formed at high water. The neighbourhood was rather poor in vertebrates, the collecting of which was the chief object of his journey, and so his stay here only lasted a week and a half in July 1906.

Proceeding the Betsiboka river, which falls into Bombetoke bay, he continued his journey further up the country to the small town of *Marovoay*, inhabited by natives, and situated at the mouth of a river of the same name, which here falls into the Betsiboka. *S:te Marie de Marovoay*, frequently mentioned in the following text, is a farm one day's journey from this town, and was Dr. KAUDERN's headquarters during the whole of the year. It is situated on the north slope of the Ankarafantsika plateau, surrounded from east to west by a dry grass-plain, here

and there dotted with some raffia-groves, indicating the presence of waterpools which never dry up even during the six months of the dry season. The animal life in this plain is rather poor and uniform. In the northwest, the grass-plain changes its appearance, the ground becoming more hilly, with the zattapalm as the most characteristic plant. A large forest — tall and beautiful for the westcoast of Madagascar — extends south of S:te Marie; here the animal life was much richer than in the plain. From this central point longer and shorter collecting trips were made to various places all about the country.

Dr. KAUDERN spent the last days of the year at Majunga again. Then he started in a sailing boat to Mahajamba bay, about 100 km. further north, and up the Sofia river, proceeding by land to the small village of *Andranolava*, situated about halfway between the east and the west coast. This place now became to the end of March new headquarters for his excursions. *Andranolava* gets its name from the river *Andranolava*, which here falls into the broad and rapid *Bemarivo* river (an = at, rano = water, lava = long). The river, having changed its course several times, has cut out a broad and deep valley with many small parallel channels, in the bottom of which there still sometimes flow small brooks. Heavy grass flourishes in the old river-beds; here and there stand some palms or other kinds of trees, and a dense bush grows along the borders of the small brooks. The valley is enclosed by mountain slopes, to a large extent covered with beautiful woods, which had more resemblance to a tropical forest, than that of S:te Marie. The animal life was about the same at the two headquarters.

The collections brought home belong to the zoological museum of the university of Stockholm, where the reptiles and the batrachians have been kindly placed at my disposal.

Snakes.

Typhlops braminus DAUD.

Boulgr., *Cat. Sn. I*, p. 16.

Four specimens from Majunga, 150—160 mm. in length, found under stones in a garden and in the moist earth of a partly drained mangrove-marsh. Mr. KAUDERN believes the species to be rather common at that place.

Boa madagascariensis. DUM. BIBR.BOULGR., *Cat. Sn. I*, p. 120.

One specimen from S:te Marie de Marovoay, found in the forest during the dry season, $\frac{17}{8}$ 1906. This snake is rather rare in the tracts explored; the natives call it »do».

When measured just after it was killed, the specimen was found to be two metres in length, but Mr. KAUDERN says that the species may be considerably larger and as much as three metres and more.

V. 234, A. 1., Subc. $\frac{36}{6}$, Scales in 66 rows.**Boa dumerilii** JAN.BOULGR., *Cat. Sn. I*, p. 120.

There is no specimen of this species in the collection, but Mr. KAUDERN speaks about a specimen of middling size that was kept by the natives in order to catch mice. In the house at Andranolava, where he lived some time, the snake climbed among the beams of the ceiling, hunting for the numerous small rodents.

Polyodontophis torquatus BOULGR.BOULGR., *Cat. Sn. I*, p. 183; JAN, *Iconogr. Gen. ophid. Liv. 16, Pl. III, fig. 1, 2*.

One specimen, 25 km. south of S:te Marie de Marovoay, on the ground in the forest, $\frac{23}{11}$ 1906. Total length 400 mm, tail 100 mm. V. 168, A $\frac{1}{1}$, Subc. $\frac{7}{5}$.

The specimen corresponds in colour very well with *P. torquatus* but in some respects with *P. rhodogaster* SCHL. too, having not only a crossband behind the parietals but also the whole upper part of head darker than the body, as in JAN's figure N:o 2 of *P. rhodogaster*, besides which the frontal is considerably shorter than the parietals (viz. 3,2 and 5 mm), according to BOULENGER's catalogue an important *rhodogaster*-character. Thus, it seems to me, in accordance with the opinion of several writers, as if the two forms can be regarded as two varieties of colour of the same species rather than as two distinct species.

Dromicodryas bernieri DUM. & BIBR.BOULGR., *Cat. Sn. I*, p. 189; BOETTGER, *Abh. Senck. Ges. XII, 1881, p. 443*; JAN, *Icon. Gén. 31, Pl IV, fig. 1*.

One specimen from S:te Marie de Marovoay. V. 222, A $\frac{1}{1}$, Subc. $\frac{11}{7}$, Scales in 19 rows.

Both the ventrals and the subcaudals are, as shown, more numerous than BOULENGER states as the maximum in this species (viz. 203 and 111). The species seems to prefer damp places, but the natives say, however, that it likes dry localities rather more than the following species does, being oftener found in the forest than the latter; they call it »rama vali». He lives mostly on frogs.

Dromicodryas quadrilineatus DUM. & BIBR.

BOULGR., *Cat. sn. I*, p. 190; BOETTGER, *Abhandl. Senck. Ges. XII*, p. 443; JAN, *Icon. Gén. 31, Pl. IV*, fig. 2.

Three specimens from S:te Marie de Marovoay. Total length 890—1090 mm; tail 260—300 mm. V. 200—206, Subc. 110—116 pairs.

All the specimens have four dark stripes on the back, two broader innermost and two narrower outermost, but only one has the general yellow spots on the head. In this latter specimen the head is also considerably broader than in the other two and in the *bernieri*-specimen. According to BOULENGER'S catalogue this one is a typical *D. quadrilineatus*, which is not the case as regards the two others, the heads of which are of the same colour and the same shape as in the *bernieri*-specimen. The characters, established as distinguishing the two species, being rather unimportant, and as shown, merging besides into each other, I believe that there are no sufficient grounds for their specific distinction. The only difference I am able to find out from the specimens and from the descriptions is the different number of the dark longitudinal stripes, which are three in *D. bernieri* and four in *D. quadrilineatus*, but this difference too may disappear, the two innermost stripes in the latter species sometimes running into one (the variety *trilineata*).

The natives, however, distinguish the three- and four-striped forms, calling the latter »maro longo», which according to Mr. KAUDERN signifies a numerous genus. This snake is the most common one in the districts explored, and is to be found everywhere both during the rainy and the dry seasons. Like the preceding species it feeds upon frogs.

Tropidonotus lateralis DUM. & BIBR.

BOULGR., *Cat. Sn. I*, p. 269.

One specimen from Andranolava, during the beginning of the year 1907 (rainy season) on a rise of wood.

Total length 87 cm., V. 164, A $\frac{1}{1}$, Subc. $\frac{90}{90}$.

Lioheterodon madagascariensis DUM. & BIBR.

BOULGR., *Cat. Sn. I*, p. 269.

Four specimens, S:te Marie de Marovoay and Andranolava.

N:o 1.	Total length	1260 + 240 mm.,	V. 213,	A 1,	Subc. $\frac{67}{67}$.
» 2.	»	» 1200 + 240	» V. 209,	A 1,	Subc. $\frac{66}{66}$.
» 3.	»	» 1000 + 220	» V. 210,	A 1,	Subc. $\frac{64}{64}$.
» 4.	»	» 950 + 200	» V. 209,	A 1,	Subc. $\frac{65}{65}$.

This snake was only seen during the rainy season, but was then common in very moist places in the forest. At S:te Marie it is called »menará».

Lioheterodon modestus GNTHR.

BOULGR., *Cat. Sn. I*, p. 269.

One specimen from Andranolava, $\frac{13}{3}$ 1907. Length 315 + 85 mm., V. 166, A 1, Subc. $\frac{67}{67}$.

Common during the rainy season, especially in open places in the forest or at the edge of it; it was often found in the holes of the ants in the earth. When irritated, it spreads out its neck like a cobra and tries to bite.

Ithyocyphus miniatus SCHLEG.

BOULGR., *Cat. Sn. III*, p. 35.

One specimen from Andranolava, $\frac{16}{3}$ 1907. When killed, it measured 1530 mm. It is a typical tree-snake, called by the natives »fandrefiala», signifying: »he measures the wood by fathoms», i. e., throwing himself from tree to tree. Another native name for it is »peely». It is regarded as poisonous, and the natives are very much afraid of it. The specimen in question had a rat in its stomach.

Eteirodipsas colubrina SCHLEG.

BOULGR., *Cat. Sn. III*, p. 39.

Four specimens from S:te Marie de Marovoay and Andranolava.

N:o 1	Total length	630 mm.	V. 182,	A $\frac{1}{1}$,	Subc. 3 + $\frac{57}{10}$,	Scalerows	29
» 2	»	» 320	» V. 192,	A $\frac{1}{1}$.	» $\frac{70}{10}$,	»	27
» 3	»	» 295	» V. 186,	A $\frac{1}{1}$,	» $\frac{65}{10}$,	»	27
» 4	»	» 210	» V. 185,	A $\frac{1}{1}$,	» $\frac{61}{10}$,	»	25

When irritated, it coils up and bites like a viper. The species was rather common in the districts in question during the rainy season; by the natives it is named »mantertr».

Mimophis mahfalensis GRAND.

BOULGR., *Cat. Sn. III*, p. 171.

Six specimens from S:te Marie de Marovoay.

N:o 1	Total length	600 mm.	V. 160.	A $\frac{1}{1}$,	Subc. $\frac{87}{10}$.
» 2	»	» 520	» V. 162,	A $\frac{1}{1}$,	» $\frac{90}{10}$.
» 3	»	» 500	» V. 161,	A $\frac{1}{1}$,	» $\frac{98}{10}$.
» 4	»	» 500	» V. 166,	A $\frac{1}{1}$,	» $\frac{90}{10}$.
» 5	»	» 430	» V. 164,	A $\frac{1}{1}$,	» $\frac{91}{10}$.
» 6	»	» 390 ¹	» V. 152,	A $\frac{1}{1}$,	» —.

In the two smallest specimens (N:o 5 and 6) the usual dark markings on the head and the dark dorsal stripe are very indistinct, especially in N:o 5 in which there appears only a faint indication of the narrow light line which is usually to be seen in the dark vertebral band. The natives call this snake »ombimati» (signifying killed ox or flesh of ox) on account of its red ground-colour. It is seen everywhere, sometimes climbing in the bushes.

Lizards.

Hemidactylus frenatus DUM. & BIBR.

BOULGR., *Cat. Liz. I*, p. 120.

18 specimens from S:te Marie de Marovoay; very common in the houses.

Hemidactylus mabouia MOR. DE JONNÈS.

BOULGR., *Cat. Liz. I*, p. 122.

3 specimens from S:te Marie.

¹ The tail is mutilated.

Lygodactylus tolampyæ GRAND.

GRANDIDIER, *Ann. Sc. Nat. Zool.* (5) 15, 1872, art. 20, p. 8;
MOCQUARD, *Bull. Soc. Phil. Paris* (8) 7, 1894—95, p. 94.

One specimen ²⁸/₁₀ 1906. S:te Marie de Marovoay.

If *Lygodactylus tolampyæ* GRAND. is to be regarded as a true species, distinguished from *L. madagascariensis* BOETTGER, I believe that this example must be reckoned to the first mentioned species. It completely corresponds, however, with *L. madagascariensis* too, except the under surface of the tail, where we find distinctly enlarged scales, arranged in a median row at least on the posterior part. On the base of the tail the enlarged scales are placed rather irregularly, though on this part, too, they are in the middle of the under surface.

Geckolepis maculata PETERS.

BOULGR., *Cat. Liz. I*, p. 192.

One specimen; S:te Marie de Marovoay, ¹⁰/₉ 1906, in the house. It lives together with *Hemidactylus frenatus* but is not common.

Homopholis heterolepis BOULGR.

BOULGR., *Ann. Nat. Hist.* (6) 17, 1896, p. 447.

One specimen; Andranolava, under the loose bark of a large tree.

The species is established by BOULENGER by a specimen from the Southwest of Madagascar, and I am now able to state that it also occurs in the northern part of the great island. The specimen agrees very well with BOULENGER's description, but differs by showing a distinct claw on the thumb as well on the inner toe in opposition to BOULENGER's statement, according to which the absence of claw on the inner digits should be characteristic for the genus *Homopholis*. An examination of two specimens of the other species of that genus, *H. wahlbergii* SMITH, which are kept in the Royal museum in Stockholm, shows, however, that in this species too there are claws on all digits, though they are rather difficult to discover in the smallest of the two specimens. Probably the presence of claws is a character of the genus, and what BOULENGER says in this respect seems to be a mistake.

STEINDACHNER shows also (*Sitzber. Akad. Wiss. Wien* 1907, p. 1539) that the same state of things is to be found in

the allied genus *Platypholis* (*P. fasciata* BOULGR.), in which he, in opposition to BOULENGER, has seen claws on all digits. On this account he says : »Vielleicht wird sich ein ähnliches Verhalten auch für die *Homopholis*-Arten bei einer neuerlichen gründlichen Untersuchung nachweisen lassen». The correctness of this supposition appears by the facts, now mentioned.

Like BOULENGER's type-specimen this example is a male, measuring 220 mm in total length; the length of the tail is 120 mm, that of the nose 12 mm.

***Phelsuma madagascariensis* GRAY.**

BOULGR., *Cat. Liz. I*, p. 214.

Four specimens from Andranolava and S:te Marie. Common in the woods, but also found in the houses.

***Hoplurus sebæ* DUM. & BIBR.**

BOULGR., *Cat. Liz. II*, p. 129.

11 specimens, the largest of which measures 335 mm in total length (the tail, somewhat mutilated, is 195 mm.). The species was common throughout the whole district in question, especially in stony places. The animals are very stationary, staying in the same hole in a large tree (often in the open field) or under a stone, day after day waiting for prey.

***Zonosaurus laticaudatus* GRAND.**

GRANDIDIER, *Rev. et Mag. de Zool.* (2) T. 21 1869, p. 341.
MOCQUARD, *Bull. Soc. Phil.* (8) T. 7—8 1894—96, p. 98. STEINDACHNER, *Sitzber. Ak. Wiss. Wien T.* 100 1891, p. 300.

2 specimens from S:te Marie de Marovoay and Andranolava among rubbish on the riverbank. Total length 465 mm. (tail 315 mm.) and 490 mm (tail 325 mm.).

I have not been able to find any good description of this species in the scientific literature, GRANDIDIER's original diagnosis being very incomplete, and MOCQUARD and STEINDACHNER, quoted above, only giving short notes about it. On this ground I was very doubtful whether my specimens ought to be considered as belonging to this species or perhaps as new. Through the kindness of my friend Professor E. LÖNNBERG and of Dr. G. A. BOULENGER, however, I have been assured that the specimens agree very well with specimens of *Z. laticaudatus*, kept in the British Museum of Natural History. As then this spe-

cies seems to need a more complete diagnosis, I will give a closer description of these specimens.

Frontonasal as long as broad, or a little longer than broad, forming a suture with the rostral (in specimens in the British Museum the frontonasal is separated from the rostral) and widely separated from the frontal; rostral rectangular, considerably broader than high, præfrontals large, with a long median suture; frontal hexagonal, as long or not quite as long as its distance to the tip of the snout; parietals large, in the one specimen a very small interparietal, which is lacking in the other; four labials anterior to the subocular;¹ the eye encircled by a series of small scales, 11—13 below and 5—7 above the orbit; four supra-oculars, the two middle largest; a postnasal and a large loreal, touching the upper anterior corner of the orbit; at the lower anterior corner there are one or two small præoculars; between the eye and the earopening four temporals, a large one above and 3 smaller below; a long narrow scale borders the anterior margin of the ear, projecting over the large opening like a kind of lid.

Dorsal scales strongly keeled, in 24 or 26 longitudinal and 42—45 transverse series from occiput to base of tail; the scales on the sides of the body broader than those on the back; ventrals in 8 longitudinal rows; 25 or 26 femoral pores on each side (22 in a specimen in British Museum). Tail cylindrical, except the base, which is depressed with the upper surface considerably broader than the lower, its vertical section being nearly triangular; the tail more than twice as long as the head and body.

Dark olive brown above and on the sides, the back dotted with yellow, a broad light band on each side, extending from the occiput out on the base of the tail; the head uniform light brown; under surfaces dirty white; in one specimen the chin and throat dotted with black.

Mabuia elegans PETERS.

BOULGR., *Cat. Liz. III*, p. 199.

Six specimens from S:te Marie de Marovoay and Majunga. Length from 97—180 (55+125) mm.

The three largest specimens have the dark lateral band edged with white even on its upper margin, and in two of these

¹ Five according to STEINDACHER.

same specimens the præfrontals form a median suture; thus, in this species, too, the frontonasal and the frontal are sometimes not in contact. These lizards are to be found everywhere on sandy and dry places; the ground colour varies in correspondence to the environs.

Mabuia gravenhorstii DUM. & BIBR.

BOULGR., *Cat. Liz. III*, p. 200.

One specimen from S:te Marie de Marovoay, $^{12}/_{11}$ 1906. Length 68 + 55 mm; the tail broken and reproduced to some extent.

According to Mr. KAUDERN, the species lives in the woods in opposition to the preceding species, which prefers open places.

Chamæleon verrucosus CUV.

BOULGR., *Cat. Liz. III*., p. 454.

Nine specimens from Majunga and S:te Marie. Total length 300—450 mm. The species is very common; one of the examples was caught in a room. The colour is generally light grey to dark brownish black, but the specimen caught in the house was a pretty grass-green. All the chamelions are called on the Hova language »tanala», on the sakalá language »torondro».

Chamæleon rhinocerotus GRAY.

BOULGR., *Cat. Liz. III*, p. 456.

One specimen, S:te Marie de Marovoay in the forest, $^{19}/_{8}$ 1906. 70 + 80 mm. in length.

Brookesia superciliaris KUHL.

BOULGR., *Cat. Liz. III*, p. 474.

One specimen, S:te Marie de Marovoay $^{18}/_{11}$ 1906, 41 + 24 mm in length. The species lives in the forest among dry leaves on the ground and resembles its surroundings in a high degree.

Brookesia ebenaui BOETTG.

BOULGR., *Cat. Liz. III*, p. 475.

Two specimens, male and female in copulation; S:te Marie de Marovoay $^{22}/_{11}$ 1906 on a bush in the wood.

The only difference I can see between the sexes, except that the female is considerably distended by 3—4 large ova

(as large as peas), is the different shape of the head; at least in these specimens the male has a shorter nose and broader interorbital space than the female, the last mentioned measurement being in percentage of the distance between the hind margin of the orbit and the tip of the nose in the male 77 %, in the female only 62 %. The length of the male is 39 + 26 mm, that of the female 43 + 31 mm.

Crocodiles.

Crocodilus niloticus LAUR.

BOULGR., *Cat. Chel. Croc.* p. 283.

A small specimen from S:te Marie de Marovoay, about 1 m. in length.

Marovoay signifies many crocodiles (maro = many, voay = crocodile). »There are good reasons for the name», says DR. KAUDERN, »the branch of the river on which the little town is situated, swarming with crocodiles.» When he went there, he saw 50 crocodiles in half an hour.

Chelonians.

Sternotherus nigricans DONND.

BOULGR., *Cat. Chelon.* p. 195. SIEBENROCK, *Zur Systematik d. Gattung Sternotherus in Zool. Anz.* 26, p. 191.

Several specimens from S:te Marie, where the species was common in pools and stagnant water.

In agreement with TORNIER (*Zool. Jahrb. Syst.* 13, p. 585), I am able to state that the nose is distinctly notched and also keeled, the faint keels ending in a small cusp on each side of the notch. In these characters the specimens agree very well with some examples of *St. sinuatus* SMITH, kept in the Royal Museum of Natural History at Stockholm, but the plastral shields are quite in conformity with SIEBENROCK's description of *St. nigricans* and distinctly distinct from that of *St. sinuatus*. In one of the specimens the three middle vertebrals are broken up into five smaller shields, forming two rows with the shields wedged in between each other.

Length of shell 180 mm.

Batrachians.

Rana labrosa COPE.

Tomopterna labrosa, COPE, *Proc. Acad. Nat. Sc. Philad.* 1868, p. 138. *Pyxicephalus madagascariensis*, GRANDIDIER, *Ann. Soc. Nat. Zool.* (5) T. 15, 1872, Art. 20, p. 9. *Rana labrosa*, BOETTGER, *Kat. Batr. Senckenb. Mus. Frankfurt am Main* p. 3, 1892. MOCQUARD, *Bull. Soc. Phil.* 8 Ser. Tome 7, Paris 1894, p. 105 and 125, 9 Ser. Tome 4, Paris 1902, p. 17.

Four specimens from Ste Marie de Marovoay, ^{19-21/11} 1906, among high grass in the field; at this time very common in these localities; 50—54 mm. in length between vent and tip of snout.

All the specimens are rather differently coloured; it seems, then, as if the species is very variable in colour. The ground-colour varies from olive grey to light or dark brown. In one of the specimens the median dorsal stripe is lacking, in the others it is of a different breadth. The light lateral stripes, mentioned by GRANDIDIER, are to be seen in two of the specimens, though in the one of these they begin far behind the eye. The arrangement of the dark spots on the upper surface is also very variable; in one specimen they are, as COPE mentions, disposed in pairs, the first pair being placed on the sides of the snout and the second on the eyelids, forming a dark crossband between the eyes. In another specimen none but the posterior spots are placed in pairs, the others merge into two longitudinal bands, with the middle parts angularly bent inwards, and the diverging anterior parts touching the eyelids. In this specimen there is no dark crossband between the eyes, the upper surface of the head and a broad, very distinct space between the dark bands and the spots being light. In the two other specimens the dark spots are irregular, forming on the anterior part of the back an hour-glass-shaped marking.

In all the specimens we find a light streak from the anterior corner of the eye to the upper lip, and a dark fold above the tympanum, which latter is brown with a white centrum. The crossbars are 4 or 5 in number on the thigh, 4—6 on the tibia. The sides of the body are lighter than the upper surface. The entire under surface is uniform yellowish white, only on the chin are there small dark dots. The sides and the posterior

part of the belly are distinctly granular. Under a magnifying glass all the surfaces of the body seem to be provided with very small and horny spines. On the back there are in all the specimens narrow irregular folds. The small tarsal tubercle is sometimes very distinct on account of its colour, which is lighter than the surrounding parts of the tarsus. In three of the specimens the large metatarsal tubercle is at least as long as the inner toe; in the 4:th it is a little shorter.

All the specimens are males with two darkbrown rugosities on the thumb, one on the middle of the upper surface and another at the base of the inner side.

***Rana mascareniensis* DUM. & BIBR.**

BOULGR., *Cat. Batr. sal.*, p. 52.

Three small specimens (25 mm between nose and vent) from S:te Marie de Marovoay $\frac{9}{8}$ and $\frac{19}{11}$ 1906. According to Mr. KAUDERN, the natives say that the specimens in this district are always of such small dimensions.

***Megalixalus boettgeri* MOCQ. var. *luteostriata* nov. var.**

MOCQUARD, *Bull. Soc. Philom.* 9 ser. Tome 4, Paris 1902, p. 1.

Five specimens, Andranolava, February and March 1907; one large specimen, 30 mm between nose and vent, three small ones, 16—19 mm, and the fifth (15 mm) with a tiny fragment of the larval tail.

The specimens agree very well with MOCQUARD'S description (loc. cit.), except in the colour, which differs in some degree. In the specimens in spirit the whole upper surface, also that of the limbs, is olive green; the larval specimen is the darkest, the large specimen the lightest, with a faint shade of yellow, the colour becoming lighter with age. In the living specimens the colour was a pretty bluish green with a tint of yellow. As is seen, the ground-colour is the same as MOCQUARD says his specimens are: »vert pâle uniforme» and in spirit »vert bleuâtre», but in my specimens there are also two longitudinal saffron-coloured lateral bands, one on each side, extending from the nostrils, above the eye to the loins. An indication of such bands is to be seen even in the larval example, becoming more and more distinct with age. In the large specimen these stripes are very distinct, and are sharply defined from the ground-colour,

which is darker close to the lines than elsewhere. In the two largest examples another light stripe, yellow in the largest one, white in the other, extends along the upper and inner side of the tibia. In one of the small specimens there are no stripes at all, and it is possible that the non-striped form, described by MOCQUARD from Isaka in the southwest of Madagascar, also lives in this district. Mr. KAUDERN says, however, that all the large specimens he saw had distinct yellow stripes, and probably this example has only retained its early colour longer than the others; in fact, the stripes are rather indistinct also in the other small specimens; first in the fullgrown stage they seem to be perfectly distinct. Possibly, the two forms may be regarded as geographical varieties.

The animals live among tall grass (as high as 2 m.), to the coarse stems of which they usually were found clinging. They are then very like their surroundings and are very difficult to see; in this position they remain absolutely still and do not move before they can nearly be caught by the hands.

Dyscophus antongilii GRAND.

BOULGR., *Cat. Batr.*, p. 180; BOETTGER, *Abh. Senck. Gesellsch. Frank.* 12, 1881, p. 489, Pl. 3. (*D. sanguineus*); STEIND. *Sitzber. mat. nat. Cl. Akad. Wiss. Wien Bd.* 85, 1882, p. 191 (*D. guineti*, part); MOCQUARD, *Bull. Soc. Phil.* (8) 7, Paris, 1894—95, p. 109.

One specimen, 40 km from Sainte Marie de Marovaoy, 2²/₉ 1906, in a clay-pit in the plain.

The colour in spirit is olive brown above, with the sides considerably lighter and the under surfaces, except the chin, white. Two bands of the same colour as the back extend from the eye, the one to the shoulder, the other to the angle of the mouth. According to what Dr. KAUDERN says, the specimen, when alive, was light red with a tint of blue. The specimen agrees very well with BOULENGER's description, with the exception of the tympanum which is completely hidden, and of the belly which is distinctly tuberculated (not smooth).

Calophrynus calcaratus MOCQUARD.

MOCQ., *Bull. Soc. Phil.* (8) 7, p. 108, Paris 1894—95.

Two specimens, 18 and 22 mm in total length; Andranolava in a moist place near the river.

The specimens correspond in many respects with MOCQUARD's description, but differ in several points. I was therefore very doubtful, whether they should be assigned to this species or regarded as a new one. In a letter to Dr. MOCQUARD I gave a brief description of them, asking him for a comparison with the type-specimen, and he kindly answered that, in his opinion, my specimens are true *C. calcaratus*.

The characters in which my specimens, which are very well preserved, differ from MOCQUARD's description are as follows: From the posterior margin of the eye-opening there extend two distinct folds, viz. one to the shoulder and another to the groin, running along the sides of the body; the upper surface is distinctly tuberculated; in the small specimen the canthus rostralis is angular, and in both the nose is acuminate, not rounded; the tips of the fingers and toes are rounded; the tarsal tubercle is situated almost centrally between the distal point of the tibia and the large inner metatarsal tubercle; there is no trace of an outer metatarsal tubercle.

The colour agrees fairly well with that of the type-specimen. The large specimen differs in having distinctly marked dark spots on the anterior part of the light belly, and in both there is a narrow median light line on the throat. In the small specimen the sides behind the fold to the shoulder and below the lateral fold are chocolate-brown, bordered above with a black margin, sharply defined from the light upper parts of the loin and extending along the thighs like a dark stripe.

Tryckt den 17 december 1910.